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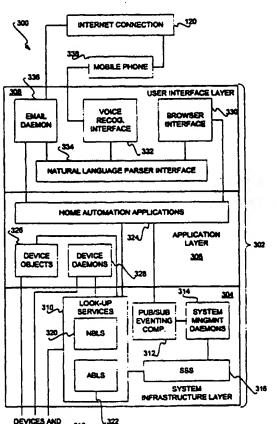
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(54) Title: ARCHITECTUR FOR AUTOMATION SYSTEM



(57) Abstract: An architecture for an automation system is disclosed that includes look-up services, a soft-state store, and a publication/subscription eventing component. The look-up services maintain a database of a number of devices to be controlled and monitored, and a database of a number of device objects corresponding to the devices. The services can be divided into attribute-based and name-based services. The soft-state store manages variables regarding the devices and the device objects, including heartbeats. The eventing component enables subscriptions to events related to changes in the variables. The architecture can include management daemons, such as a monitoring daemon that detects problems with power in edevices.

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INTERNATIONAL SEARCH REPORT Int. Horsel Application No PCT/US 00/22578

(Continue	STION) DOCUMENTS CONSIDERED TO BE RELEVANT			
ategory *	Citation of document, with indication, where appropriate, of the relevant passa	ages	Relevant to claim No	
	EP 0 778 684 A (NCR INT INC) 11 June 1997 (1997-06-11) column 1, line 35 - line 50		1-20	
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INTERNATIONAL SEARCH REPORT

Int .ional Application No PCT/US 00/22578

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0932275	Α .	28-07-1999	US JP	6038625 A 11275117 A	14-03-2000 08-10-1999
EP 0778684	A	11-06-1997	US JP	5745682 A 9190396 A	28-04-1998 22-07-1997